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Intro to Archaeology
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25 October 2007

R(o)ygb(i)v: Horizontal Color in the New York Subway

The subway arrives in color. In our minds, our stations, and our maps, the New York City subway system arrives in colors: red, blue, orange, green, purple, etc. Whether you are holding a map, navigating the station, or standing on the platform, deciphering this subway means using color as a tool of instantaneous and conscious differentiation. That is, when we trace a line with our finger, spot a sign, or peer into the tunnel, we are consciously looking for a specific color, and can know instantaneously whether or not a train is “ours.” But the nature of this scheme is to operate in a “vertical” orientation. As we ride toward our destination, we ride *with* a color; as we glide north and south beneath the grey city, moving against the horizontal grid of cross-streets, the A train remains blue and the 1 remains red—no matter what station, either West 4th or 200th. But little-known in the New York subway complex is a limited, enigmatic system of “horizontal” color, bands of colored tile on station walls—a system which, theoretically, gives us the sense not of moving *with* a color, but *through* changing colors: green at West 4th, red at 200th etc. As a result of poor documentation and limited use, however, what we know of the colors is preserved primarily on the subway station walls; a once-modern scheme has silently become archaic, found only in an archaeological context. Thus, like an underground palimpsest, this horizontal coloring has suffered, and so built up, a stratigraphy of changes (renovations, minor alterations) divorced from primary intention and design—changes which illustrate just how, in the last fifty years, the subway has fundamentally altered its mission, and hidden its past.

It is important, however, to first recount the history of the most ubiquitous color-code, the

“vertical” scheme. Developed in 1968 by Unimark designers Bob Noorda and Massimo Vignelli, the scheme aimed not to colorize but to clarify: to clear the stations of clutter (a 60-year buildup of signs in various black typefaces) and standardize crucial points of decision with simple textual signage.¹ Colorizing the lines, then, was not a priority, and was limited to the train “logo” (the common ❶ or ❷).² It was not until Vignelli drafted a subway map in 1972 that the subway came into technicolor [fig. 1*]. According to the map’s legend, “Every route of the New York City subway system is identified by its own number or letter[s] and a color.”³ These 26 colors were simplified in 1979 into the more well-known route color groups: blue, orange, red, etc.

Historically, of course, the New York subway system was not systematically colorized, or even particularly colorful. The earliest decorations of the Interborough Rapid Transit (IRT) subway stations (the first in New York) were limited to a respectable, muted palette in a normal, turn of the century style.⁴ The subway cars themselves bore no colorized markings of any sort, and user-identification was limited to traditional train-based graphic systems: text written in bold serif typefaces.⁵ Indeed, it was primarily a textual system, both in conception of information and in decorative aesthetics; station mosaics depicted meaning-rich scenes of early Manhattan, and station symbology was itself often cryptic. Certainly there were themes in color choice, but there is no evidence of anything systematic—that is, a unified design scheme meant to communicate any message other than “sameness”; beginning in the 1930s, the IRT used exclusively white type on a cobalt background, while the BMT used red and white type on a green background.⁶

In fact, the first of what could be called “systematic color systems”—that is, systems used

¹ New York Transit Museum 2004, 140; Beirut 2007, 137.

² New York City Transit Authority 1970.

* This and all figures are available on the paper website, <http://www.columbia.edu/~rrs2123/roygbiv/>.

³ Vignelli 1972.

⁴ see Stookey 1994.

⁵ New York Transit Museum 2004, 138.

⁶ New York Transit Museum 2004, 139

for wayfinding—in the New York City subway was the “horizontal” color we are investigating, a system that architect Squire Vickers—also responsible for the colored type in the BMT and IRT lines—developed in 1932 for use in the Independent Subway System (IND), third of the three subway systems prior to unification in the 1950s⁷; the IND was the city’s first attempt to operate its own subway, in response to troubled IRT and Brooklyn Manhattan Transport (BMT) systems, both privately owned and operated.⁸ From the years 1932 to 1946, then, all new IND stations had the following color schematic [fig. 2]: stations with side platforms have a two-color stripe and two-color name tablet; stations with island platforms have only the stripes. Outbound local stops followed the color of the preceding express stop [fig. 3]. This system was used on the original construction of (to use contemporary terminology) the A/C, E/F/V, B/D, and G lines.⁹ In 1946 the program was terminated, and subsequent IND construction was “horizontally” colorless.

However, according to my survey and the surveys of others, the reality underground is no longer what Vickers designed. According to my survey, specifically, correct color-stripping has been both added to at least one station (the 207th stop on the A train), and heavily modified at the Spring Street and Canal Street stations, where renovation has altered the original color patterns, even though the original, 1930s name plaques (reading ‘Spring Street’ and ‘Canal Street’) have been preserved within the new program.¹⁰

But these are only three of many renovations on large and small scales. While the 42nd st. station has, for instance, been completely redone since its original 1932 construction, stations on the E/F Queensboro line, of particular archaeological interest, have been subject to what appear

⁷ Cunningham 1993, 8.

⁸ Cunningham 1993, 7.

⁹ That is, in the original IND terminology: the Washington Heights/Eighth Avenue Mainline (A, C), the Queensboro Line (F, V, G), the Concourse Line (B, D), the Fulton St. Line (F), the Sixth Ave. Line (B, D, F, V), the Brooklyn-Queens Crosstown Line (G).

¹⁰ Subway enthusiast Wayne Whitehorne has undertaken a more complete survey, which classifies the entirety of the IND system and its tiles according to an esoteric color scheme of Prismacolor colored pencils. It is available both via this paper’s website or <http://www.nycsubway.org/articles/indcolor.html>, and is listed in the bibliography.

to be spontaneous, haphazard renovation. The 169th st. station has, on its walls, a tile program of light red/black, we which can safely date as original. (On the wall, there are the remains of a sign reading “Toilets” and pointing up a flight of stairs [fig. 4]. Because the sign uses the original IND typeface (which Vickers specified in contracts¹¹), and because station bathrooms were being discontinued in the 1940s and 50s, it would be unlikely that the 1937 169th st. station would have been re-built in only ten to fifteen years.) Nevertheless, the point is that the station has matured into a confused mess of color [fig. 5]. Original red tile has been matched with the later addition of yellow handrails and I-beams painted in a dentist-like shade of green. Even excess ad-space, which we can tell from a visible layer of paint was once black [fig. 6], has been coated in green.

All of this, however, is not mere obsessive detail. It is crucial to the schemes’ effect on the subway passenger. And what has gone completely un-surveyed in the informal and formal surveys is the frequency at which the color of the station I-beams and other elements, like ad-space, matches the color of the original tile work. For example: though 169th street is a confusing mess of color, stations on the B/D line have a high level of color-correlation, and the experience of entering one of those stations—Tremont or Fordham in the Bronx are two—is the experience of, as stated in the introduction, moving *into* and *through* a color. The blackness of the tunnel explodes into the total color program—columns and tiles—of the station interior; the experience is jarring. We can easily imagine how a commuter, upon reaching the outer reaches of the Bronx, has stopped paying attention to signage text, but, upon entering Fordham, subliminally associates the environmental station color with the correct station for their departure.

Though other surveyors of the IND color code have not plotted their data onto a map, I have used one set of survey results (there are only three that I know of¹²) to plot such a map, in

¹¹ New York Transit Museum 2007.

¹² Whitehorne 1998; New York Transit Museum 2007; Cunningham 1993, 84-85.

order to further investigate this potential subliminality.¹³ Surprisingly, the results [fig. 7] reveal something not mentioned in any of the work on this topic: the data shows undeniably a kind of “macro” structure common to all IND routes. Though the figure explains this best, the macro structure is essentially five rings of color. The outer most ring is red; within that is a yellow ring, within that a green one, then blue, and purple is the innermost. The significance: not only do *individual* trains advance through series of horizontal colors (as illustrated in fig. 3), but the *entire system* advances through a common strata of colors that radiate outward, more or less, from Queens Plaza. That is to say, both the A and the F trains arrive in a final station that is red (red does mean stop in American symbology), after moving through stations that are yellow and green, etc. To restate: the common strata advances outward through purple, blue, green, yellow, and arrives at red. Or, to put it more familiarly, every IND train advances through the rainbow spectrum, red-(orange)-yellow-green-blue-(indigo)-violet, or R(O)YGB(I)V.¹⁴

To consider stations not accounted for in this structure seems to reveal another strata-set, or a kind of micro strata, which appears to be specific to the Queens-Brooklyn cross-town ‘G’ train, the only train that does not reach Manhattan. These micro strata thus allow the G to be red at both ends. Still, to delineate precisely *how* Squire Vickers delineated his color scheme on both macro and micro levels is, though interesting and very debatable, a question secondary to *why*. Indeed, why would Squire Vickers have envisioned a dominating, all-encompassing rainbow aesthetic, particularly when—from the experience of my own underground survey—it is totally impossible to get any sense of “moving through a rainbow,” unless we know the scheme beforehand? Moreover, why has no one ever (as far as I know) realized that such an orderly, obvious

¹³ Whitehorne 1998.

¹⁴ In truth, IND colors include both orange and indigo (all the colors vary within their general spectrum names widely, especially since time has faded and dirt has darkened many of the tiles), but not in generally predictable patterns.

macro rainbow spectrum exists below the streets of New York?

The answer to the first question hides in 1932. As we have already hinted, we can readily imagine how the experience of entering of a rigorously “colored” IND station—as on the B train in the Bronx—might shock a commuter from their half-waking state on the homeward commute. This commuter, then, relies on the subliminal color environment to properly use the train. But “properly” here differs critically from our modern conception. To use the train “properly,” we think, is to fully understand and competently navigate the subway’s symbology and wayfinding systems. If we need to make it to Dyckman in the Bronx, and we use the subway map—colorized for our convenience—to get there, we are using the system properly. But *properly* here depends on an underlying conception of the subway as something that is necessarily *comprehensible* to a first-time user. And the subway system in 1932 was not meant for tourists; tourism came after the war. In original conception, the subway was a *commuter* service that replaced older transit.¹⁵ This means two things. One: anyone using the subway would be using it on a daily, or at least highly regular basis. Two: these passengers would already be familiar with the subway routes, which were themselves based on the old “EI” (elevated) trains. Vickers, head architect of the New York subways since the 1910s,¹⁶ must have realized at least that “properly” using the subway in the 1920s meant using it every day, developing habits of use, and not thinking much while riding to and from work. So, in his last major assignment as head architect, Vickers might have intended to design IND stations that would not be *comprehensible* in the immediate present, but would be *easy to use* in the long-term future. That is: his color code would not “make sense” or really look like a rainbow, but would subliminally reward repeated use.

To be sure, this is not a foreign concept. One modern mass transit design guide puts an

¹⁵ Cunningham 1993, 18.

¹⁶ New York Transit Museum 2007.

emphasis on environmental factors for station identification,¹⁷ and at least one modern subway system, Prague's Line A, uses a spectrum-based and similarly horizontal color-coding system.¹⁸

But by 1959, New York had already entered the tourist age (around the time of the New York World's Fair), and its newly united subway system was a bewildering mess—not to native New Yorkers, for whom the complex grammar of IRT/BMT/IND signage was a first language, of course, but for tourists, who expected to find a rational system. So it is no surprise that the first “rational” New York subway map of 1959 had, on its flip side, a very welcoming “SUBWAY GUIDE TO THE CITY'S SIGHTS” [fig. 8]. (We should also note that the subway was also losing ridership beginning in the late 1950s and early 1960s, so taking in tourist traffic rapidly became a priority.¹⁹) Thus, by 1959, any old rationality in the IND system was being supplanted with a new rationality.

But we should return, for a moment, to the 169th street station on the F train, one of the clearest battlefields between the pre-tourist and post-tourists conceptions of the subway. In its original design, as stated, the station was the end-of-the-line. Thus, like the last stops on both the A and B trains, the last stop on the F Train had, and still has, a red tile pattern. According to my survey, moreover, the I-beams may originally have been painted red, to match the tile pattern; a few chips of paint off an I-beam on the south-bound platform showed a layer of red beneath the modern green. If so, this might lead us to the conclusion that Squire Vickers did have a kind of color environment in mind, but we cannot say for sure. One comprehensive collection of color photographs (available on an amateur subway history website) only goes back to 1970, after the 1950s-60s transition from an aggressively anti- to aggressively pro-tourist signage system; all or

¹⁷ Griffin 2004, 338.

¹⁸ Bennett 2004, 96-97.

¹⁹ New York City Transit Authority 1964, 22. It is also interesting to note that this is the last time in the 1960s that the Transit Authority's *Annual Report* actually lists passenger statistics for Rapid Transit (that is, the subway). In the 1965 report, Rapid Transit and Surface transit become one group, and, by 1968, the statistics are not listed at all.

most earlier photographs are, of course, in black and white, and have little to say, though in a black and white photograph of a different IND station, the I-beams have a very different paint pattern—white on top and color below—which mimics the prominent color-banding pattern.²⁰

Nevertheless, what remains of interest at 169th street are its enigmatic green I-beams and *why* they are green, even when the station is itself red. Of course, it is not such a tough question. Construction workers most likely just used the paint they used down the line at the 71st and 75th street stations, both of which have appropriate green tile to match green I-beams. Indeed, the effect of the 71st and 75th street stations is environmental and jarring. But to paint the I-beams of following stations (Van Wyck and Parsons Blvds. in addition to 169th) in the same color reflects both a critical misreading of Vickers’ design, and a critical acceptance of modern, vertical color in the subway. If all stations on the F line are gradually becoming green, it is because we think that the subway stations should be—as in the Unimark system—consistent and standardized. If the *signs* are the same at 71st and 169th, and if the F train is itself orange (on the map and in the logos), why not just paint the F train *I-beams* the same color? Most of the older-style I-beams on former IRT lines (the modern 1 and 6 trains, for example) are uniformly dark green anyway.

But here is another question: why are the I-beams on the F line not *all* green, as on the 1 train? The answer has something to do with “legacy aesthetics,” a term I am using to describe the use and misuse of Vickers’ original, rigorous coloring scheme. We can refer to the decorations of the F as a “legacy aesthetic,” for example, because they do not embody an *environmental* use of colors. If the subway decoration *did* embody this use, we would surely not refer to it as aesthetic at all, but rather as part of a wayfinding system. A legacy aesthetic has meaning instead because it imitates the apparently meaningless colors left behind on station walls, a rote acceptance of the older system—not because it makes sense, but simply because it is *there*. Still, a legacy aesthetic

²⁰ This collection is available at <http://www.nycsubway.org/lines/> (see paper website for link)

is not simply meaningless or beautifying, though it certainly does serve a beautifying function. Rather, what remains fundamental to subway style in New York is that each line, in some way, is its own *species*, and the rainbow spectrum—as we see it on the wall now—is still the defining characteristic of these species. It is not, as Vickers might have wanted, associated with the larger macro-structure.

Interestingly, Unimark's Massimo Vignelli and Bob Noorda seem to have relied heavily on legacy aesthetics. It is probably not a coincidence that all the tile-work in G line stations is green-themed, and that the Unimark signage system colored the G line green. To extrapolate, we might even conjecture that the A train is blue because it has the largest number of blue stops of any IND line, and the short B train is orange because it has the highest percentage of red-yellow-orange stops of any of the trains. Thus, more so than we might have imagined, the Unimark system is not arbitrary, but is soundly grounded in legacy aesthetics. Most significantly, this means that Unimark—in selectively employing a legacy aesthetic—destroyed the integrity of the old system as unified rainbow. Thus obfuscated by, and integrated into modern, relevant use, the old system is no longer (readily) separable from, or observable within, the new.

This solves the unanswered second question: why has no one perceived the rainbow before now? Another solution: in the modern subway, there is not a sense of IND, IRT, or BMT as at all relevant. Routes are routes, each one is a little different, each has its own destination, but all are parts of a subway whole. Because every trip costs exactly the same, there is also no need to think of the subway as moving through outward strata—whereas a subway like the London Underground [fig. 9] *does* have a progressive strata system, and does ask users to pay a variable rate for longer rides to outer strata. Historically, of course, New York did implement a variable trip-cost. This, then, may be the most elegant answer to why Vickers implemented a unified,

city-wide spectrum: it would be easier for riders to visualize progressive strata and associated costs if the stations were colorized according to those costs; a rainbow was an easy, logical way to order the color scheme. We have not perceived this spectrum precisely because there has never been a need. We pay \$2.00 for every destination, and “strata” are totally foreign to our unified system.

Even though this is a rather mundane answer, it is probably the best one. We know that Vickers thought of his color scheme as an attempt to enter the “Machine Age”,²¹ and what better way to machine decoration than to rigorously engineer the most rational of all color schemes, a natural rainbow? But, as is the case with the natural spectrum, the reality of perception is often far from the laws of physics. Over the last seventy years, the colors of the subway, like those of nature, have warped and faded—covered in graffiti, cleaned industrially, replaced altogether—and perception, too, has changed with time, mostly because it has less to do with *what* we see than with *how*—the personae we assume when we descend below ground. Are we tourists, reading every sign? Or are we natives, ignoring everything save the subliminal? Either way, the system insists that we navigate with vertical color—often at the expense of the horizontal. What remains most important, however, is that dominance of verticality is incomplete; we can still clearly see every shade of Vickers’ tiles. And so, when we stand on the station platform, killing time before Vignelli’s colored train appears in the tunnel, what might strike as the *most* arbitrary aspect of the New York subway—those lengthy bands of red or green or blue tiles stretching up and down the station walls ever since the thirties—turn out to be the *least* arbitrary. In fact, as it turns out, these colors constitute the very lexicon from which much of our vertical “rationality” was, quite routinely, derived.

²¹ New York Transit Museum 2007.

Bibliography

- Beirut, Michael. 2007. *79 Short Essays on Design*. New York: Princeton Architectural Press.
- Bennett, David. 2004. *Metro: the Story of the Underground Railway*. London: Mitchell Beazley.
- Cunningham, Joseph, and Leonard de Hart. 1993. *A History of the New York Subway System: Revised Edition*. New York: Cunningham.
- Griffin, Kenneth, and Stephen A. Kliment. c.2004. *Building Type Basics for Transit Facilities*. Hoboken, N.J.: John Wiley & Sons.
- New York Transit Museum. 2007 [exhibition: July 30 - October 28, 2007]. *Squire Vickers and the Subway's Modern Age*.
- New York Transit Museum. 2004. *Subway Style: 100 Years of Architecture & Design in the New York City Subway*. New York: Stewart, Tabori, and Chang.
- New York City Transit Authority (Unimark International). 1970. *Graphics Standards Manual*. New York: [The Transit Authority].
- New York City Transit Authority. 1964. *Annual Report of the New York City Transit Authority 1963-1964*. New York: [The Transit Authority].
- New York City Transit Authority. 1965. *Annual Report of the New York City Transit Authority 1964-1965*. New York: [The Transit Authority].
- New York City Transit Authority. 1968. *Annual Report of the New York City Transit Authority 1967-1968*. New York: [The Transit Authority].
- Stookey, Lee. 1994. *Subway Ceramics: a History and Iconography of Mosaic and Bas Relief Signs and Plaques in the New York City Subway System*. Brattleboro, Vt.: L. Stookey, 1994.
- Vignelli Design Partners. 1972. *The Metropolitan Transportation Authority Revised Map of Rapid Transit Facilities of New York City Transit Authority*. New York: [The Transit Authority].
- Whitehorne, Wayne. 1998. "IND Station Tile Colors."
<http://www.nycsubway.org/articles/indcolor.html>. (last revised: June 21, 1998)